ABSTRACT OF THE DISCLOSURE

A method and a device for time measurement at a designated signal pin or associated solder pad on a semiconductor module on which semiconductor chips are mounted using the ball-grid-array technique. Integrated on the semiconductor module in the direct vicinity of a solder pad associated with the signal pin to be measured is an equivalent conductor pattern, which can be loaded with passive components in such a way that, in the loaded state, it forms an equivalent load circuit for the designated signal pin which simulates the time-relevant characteristic electrical values of the designated signal pin. The measurement takes place after connection of the ELC to a solder pad associated with the signal pin, with the semiconductor chip detached from the semiconductor module.